



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,636	10/15/2003	Stephen W. Bedell	YOR920030340US1	4997
7590 09/26/2006			EXAMINER	
Ryan, Mason & Lewis, LLP			VU, HUNG K	
Suite 205			ART UNIT	
1300 Post Road			PAPER NUMBER	
Fairfield, CT 06824			2811	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/685,636

Applicant(s)

BEDELL ET AL.

Examiner

Hung Vu

Art Unit

2811

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 12-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/16/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 06/16/06 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakaguchi et al. (PN 6,306,729, of record).

Sakaguchi et al. discloses, as shown in Figures 1A-1F and 6A-6F, a layer transfer structure comprising a carrier substrate (11) having a porous region (13,33,43) with a tuned porosity in combination with a species (doped) positioned therein defining a separation plane in the carrier substrate.

Note that the term “implanted” is method recitation in a device claimed. “[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its

Art Unit: 2811

method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Also note that Sakaguchi et al. also disclose the porous region is doped by diffusion, ion implantation or epitaxial growth.

Regarding claim 2, “the separation plane is defined by a position and an amount of the implanted species” is method recitation in a device claimed.

Regarding claim 3, Sakaguchi et al. discloses the structure further comprising a transfer layer (12A) on the carrier substrate.

Regarding claim 4, Sakaguchi et al. discloses the structure further comprising a tunable epitaxial layer (14). Note that the term “thermally regrown” is method recitation in a device claimed.

Regarding claim 5, Sakaguchi et al. discloses a component selected from the group consisting of a device layer, an interposer structure, a functional layer and combinations comprising at least one of the foregoing components is formed in the tunable epitaxial layer.

Regarding claim 6, Sakaguchi et al. discloses the porous region comprises a varied porosity (33,43).

Art Unit: 2811

Regarding claim 7, Sakaguchi et al. discloses the porous region comprises at least two different porosities (33,43).

Regarding claim 8, note that the terms “the implanted species ...” are method recitations in a device claim.

Regarding claim 10, Sakaguchi et al. discloses the carrier substrate comprises silicon.

Regarding claim 11, note that the term “is formed by a process selected ... foregoing process” is method recitation in a device claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi et al. (PN 6,306,729, of record).

Sakaguchi et al. discloses all of the claimed limitations except material of species. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the device of Sakaguchi et al. having the materials as that claimed by Applicant, since it has been held to be within the general skill of a worker in the art to select a known material on the

Art Unit: 2811

basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. Also note that the terms “the implanted species ...” are method recitations in a device claim.

Response to Arguments

4. Applicant's arguments filed 06/29/06 have been fully considered but they are not persuasive.

It is argued, at pages 2-3 of the Remarks, that an implantation infers that the species is positioned at certain locations within the substrate and doping does not provide for positioning a species at certain locations within the doped region. This argument is not convincing because implantation is another name of doping. Note that Sakaguchi et al. also discloses the structure with two regions of different porosity. Therefore, Applicants' claim 1 does not distinguish over the Sakaguchi et al. reference.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung Vu whose telephone number is (571) 272-1666. The examiner can normally be reached on Tuesday to Friday 6:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on (571) 272 - 1732. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vu

September 14, 2006

A handwritten signature in black ink, appearing to read "Hung Vu", written over a horizontal line.

Hung Vu

Primary Examiner